

NWS Form E-5 U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL WEATHER SERVICE MONTHLY REPORT OF HYDROLOGIC CONDITIONS	HYDROLOGIC SERVICE AREA: Pocatello, Idaho (PIH)
	REPORT FOR: MONTH: August YEAR: 2017
TO: Hydrologic Operations Division, W/OH2 National Weather Service National Oceanic and Atmospheric Administration Silver Spring, Maryland 20910	SIGNATURE Travis Wyatt Service Hydrologist / Acting
DATE: September 16, 2017	
When no flooding occurs, include miscellaneous river conditions, such as significant rises, record low stages, ice conditions, snow cover, droughts and hydrologic products issued (NWS Instruction 10-924).	



An X in this box indicates that no flooding has occurred for the month within this hydrologic service area.

Overview:

Most of the area, except Eastern Butte, Northern Minidoka, Southwest Butte and Cassia counties, saw well below normal precipitation for the month. The five climate stations (Burley, Challis, Idaho Falls, Pocatello and Stanley) ranged from 0.03 inch of precipitation (0.51 below average) for Idaho Falls to 0.43 inches of precipitation (0.25 below average) for Stanley. There was one precipitation record in Stanley in the month of August for our 5 climate locations. The highest recorded monthly precipitation totals (non-SNOTEL and non-RAWS) were 1.06, 0.95, and 0.90 inches at the Craters of the Moon, the Small, and Lava Hot Springs CO-OP stations. The highest recorded 24-hr precipitation (non-SNOTEL and non-RAWS) occurred at the Craters of the Moon and the Island Park CO-OP stations where 1.06 and 0.65 fell respectively on the 8th and 16th. All basins, except the Big Lost, were below normal. Basin ranged from 30 to 151 percent of normal. The basins receiving the greatest precipitation were Big Lost, Portneuf, Big Wood abv Hailey and the Bear receiving 151%, 82%, 80% and 80% of average precipitation respectively for the month of August-based on SNOTEL data. The basins receiving the least precipitation were the Malad, Little Wood and the Henrys Fork receiving 30%, 37% and 43% of average precipitation respectively for the month of August-based on SNOTEL data.

Mean average temperatures ranged from 57.5 degrees F for Stanley to 79.0 degrees F for Paul across the HSA. Most of the area had temperatures 0 to 5 degrees above normal. The five climate stations ranged from 0.4 above normal for Idaho Falls to 4.2 above normal for Stanley. There were five high temperature records in the month of August for our five climate locations: one in Burley, one in Challis, one in Pocatello, and two in Stanley. Of the data available for the month, the stations (non-SNOTEL and non-RAWS) within the HSA reaching the highest 24-hour temperatures were Shoshone, Bellevue, and Minidoka Dam COOP stations reaching 101°F, 99°F, and 99°F respectively on the 1st, 2nd, and 29th. The station (non-SNOTEL and non-RAWS) with the lowest recorded temperature were the Island Park and Stanley COOP stations at 19°F and 20°F respectively on the 17th and 27th.

For the month of August, there was no river flooding, though river flows remained elevated overall. On August 9th, a strong thunderstorm caused localized flooding, mostly to streets, for the towns of Preston, Franklin and Whitney.

As far as the short-term 8 to 14 day Climate Prediction Center Outlook is concerned, the eastern Idaho forecast is a 33 to 50 percent chance for below normal temperatures and equal chances for above or below normal

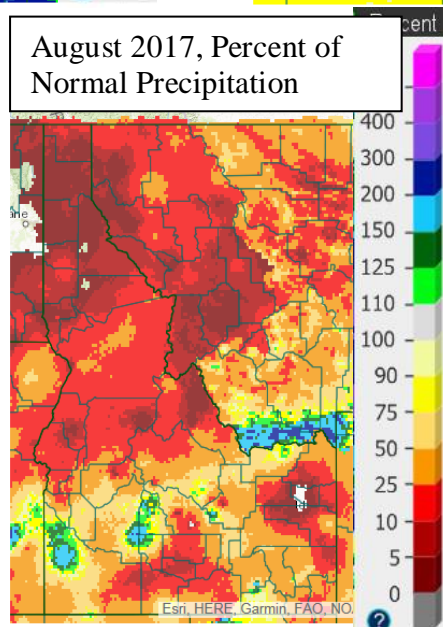
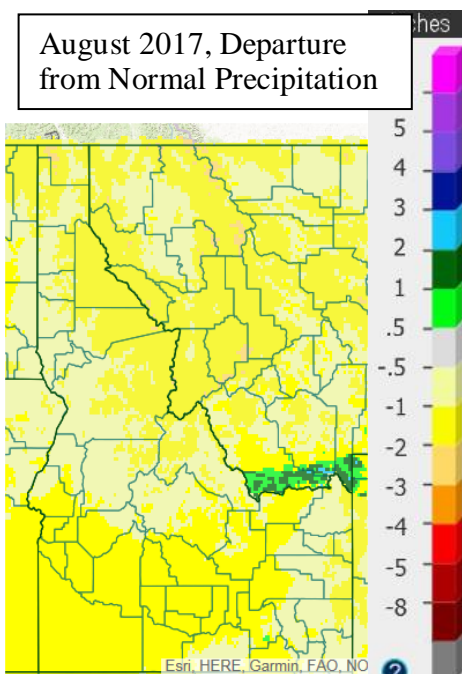
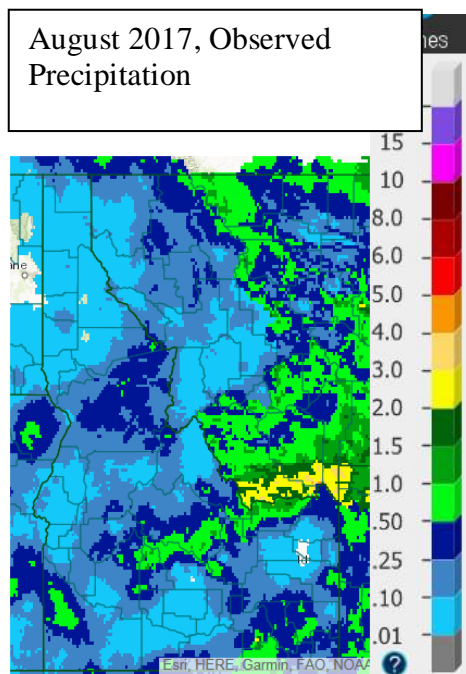
precipitation. The one-month forecast graphics are below. For the three-month outlook, the temperature forecast is a 40 percent chance to be above normal. As for three-month outlook for precipitation, the outlook is a 40 percent chance to be above normal.

Reservoirs last month overall increased storage in the Upper Snake River basin system with high irrigation demand and as of September 5 are sitting at 72% of capacity overall for capacity in the Upper Snake River system. Compared to last year at this time, it was about 26% of capacity. As of August 31, 2017, Oakley, American Falls, Little Wood, Magic, Milner, Blackfoot and Grassy Lake have the lowest percent of average capacity at 42%, 54%, 59%, 70%, 74%, 76% and 78% of average respectively. All other reservoirs are at or above 85% capacity. All reservoirs are 99 % or higher above average for this time of year. Some reservoirs are well above average for this time of year. Mackay, Little Wood and Magic reservoirs are at 385%, 208 % and 198 % above average for this time of year.

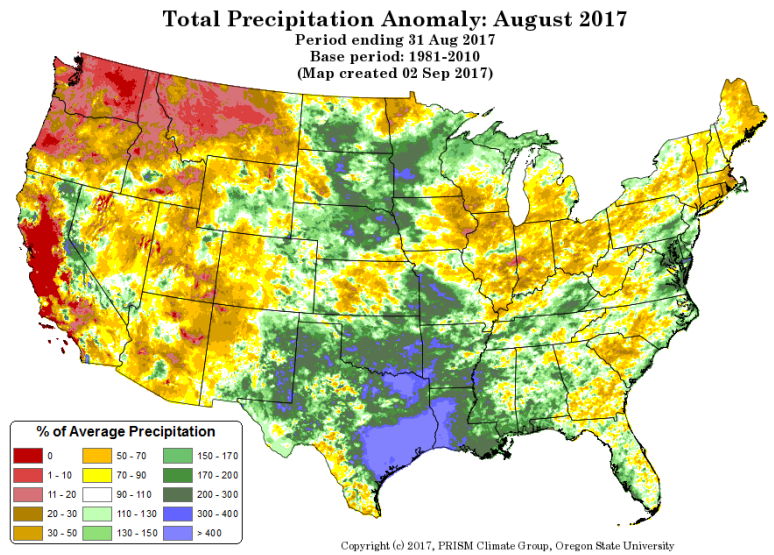
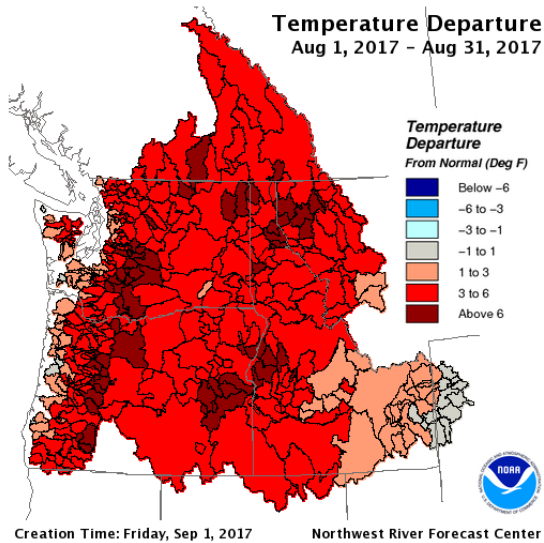
Current streamflow conditions in eastern Idaho are much above normal for the Big Wood and the headwaters of the Salmon. The Bear river near the Wyoming Border is above normal. The rest of the basins are normal. (see USGS streamflow graphic below).

Drought conditions across southeast Idaho are abnormally dry reflected on the latest U.S. Drought Monitor. The latest update of the U.S. Seasonal Drought Outlook shows the panhandle of Idaho in moderate drought conditions with a small portion of extreme northwest Idaho in severe drought.

Precipitation:

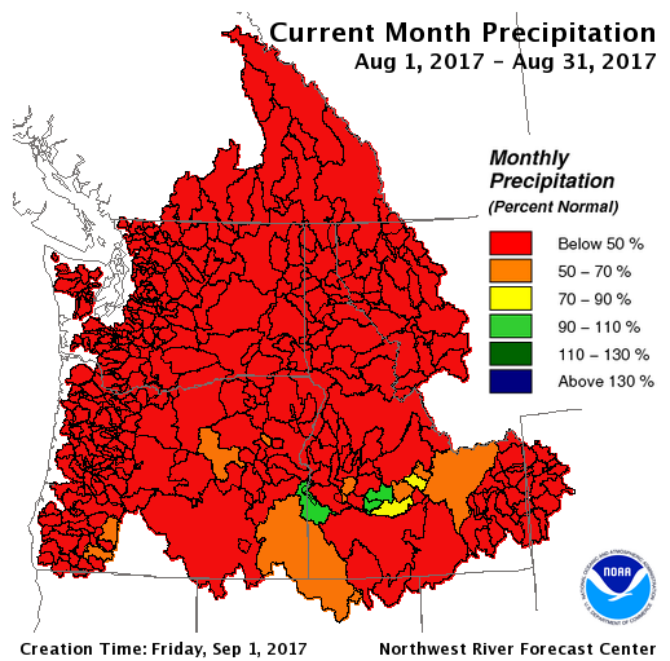
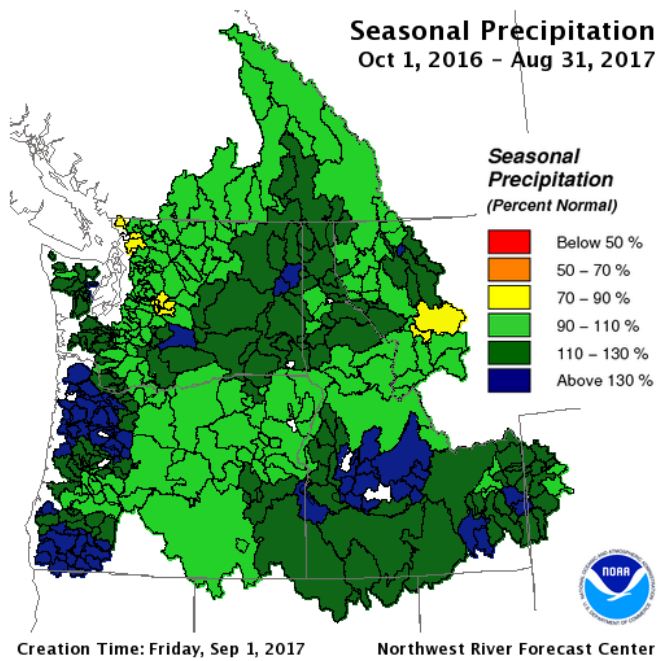


<http://water.weather.gov/precip/>



https://www.nwrfc.noaa.gov/WAT_RES_wy_summary/20170701/CurMonMAT_2017Jun30_2017070117.png

<http://prism.oregonstate.edu/comparisons/anomalies.php>



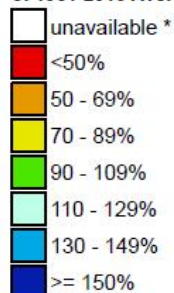
https://www.nwrfc.noaa.gov/WAT_RES_wy_summary/20170701/CurMonMAT_2017Jun30_2017070117.png

https://www.nwrfc.noaa.gov/WAT_RES_wy_summary/20170701/CurMonMAP_2017Jun30_2017070117.png

Westwide SNOTEL Water Year (Oct 1) to Date Precipitation % of Normal

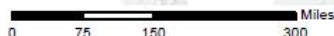
Sep 06, 2017

Water Year (Oct 1)
to Date Precipitation
Basin-wide Percent
of 1981-2010 Average



* Data unavailable
at time of posting
or measurement
is not representative
at this time of year

Provisional data
subject to revision



The water year to date precipitation percent of normal represents the accumulated precipitation found at selected SNOTEL sites in or near the basin compared to the average value for those sites on this day. Data based on the first reading of the day (typically 00:00).

Prepared by:
USDA/NRCS National Water and Climate Center
Portland, Oregon
<http://www.wcc.nrcs.usda.gov>

http://www.wcc.nrcs.usda.gov/ftpref/data/water/wcs/gis/maps/west_wytdprecptnormal_update.pdf

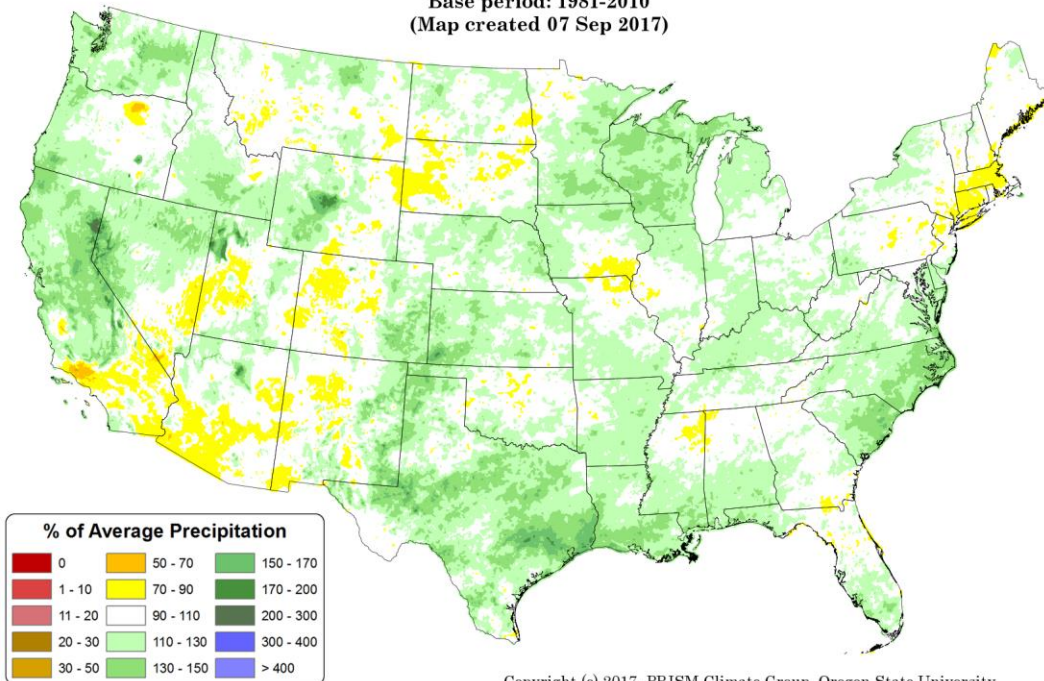
Past 2 Years of Precipitation % of Average:

Total Precipitation Anomaly: September 2015 - 06 September 2017

Period ending 7 AM EST 06 Sep 2017

Base period: 1981-2010

(Map created 07 Sep 2017)



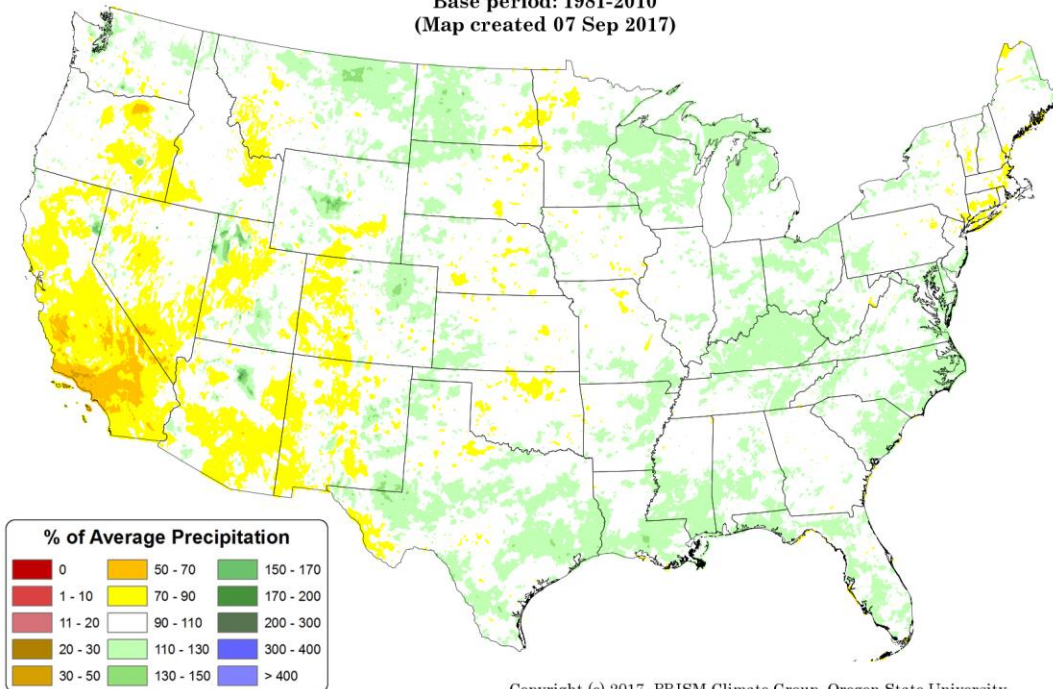
Past 6 Years of Precipitation % of Average:

Total Precipitation Anomaly: September 2011 - 06 September 2017

Period ending 7 AM EST 06 Sep 2017

Base period: 1981-2010

(Map created 07 Sep 2017)



www.prism.oregonstate.edu/comparisons/drought.php

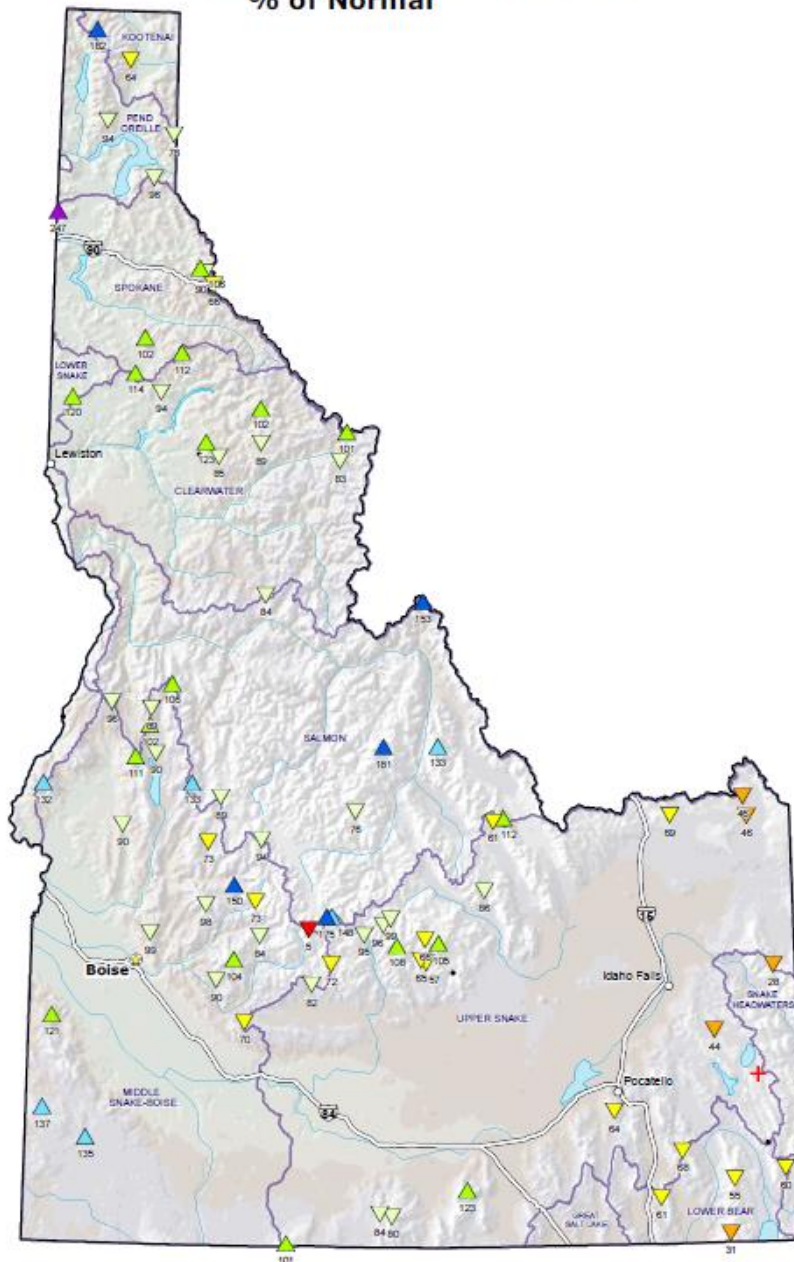
Idaho SNOTEL Month to Date (MTD) Precipitation % of Normal

Sep 06, 2017

Current MTD
Precipitation
% of 1981-2010
Average

- ▲ > 200%
- ▲ 150-200%
- ▲ 125-149%
- ▲ 100-124%
- ▼ 75-99%
- ▼ 50-74%
- ▼ 25-49%
- ▼ 1-24%
- ✚ 0%
- Unavailable*

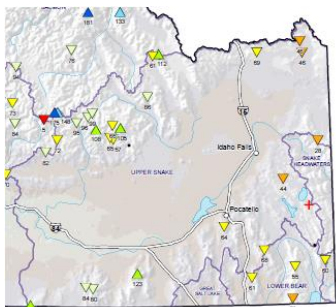
Provisional Data
Subject to Revision



Prepared by:
USDA/NRCS National Water and Climate Center
Portland, Oregon
<http://www.wcc.nrcs.usda.gov>

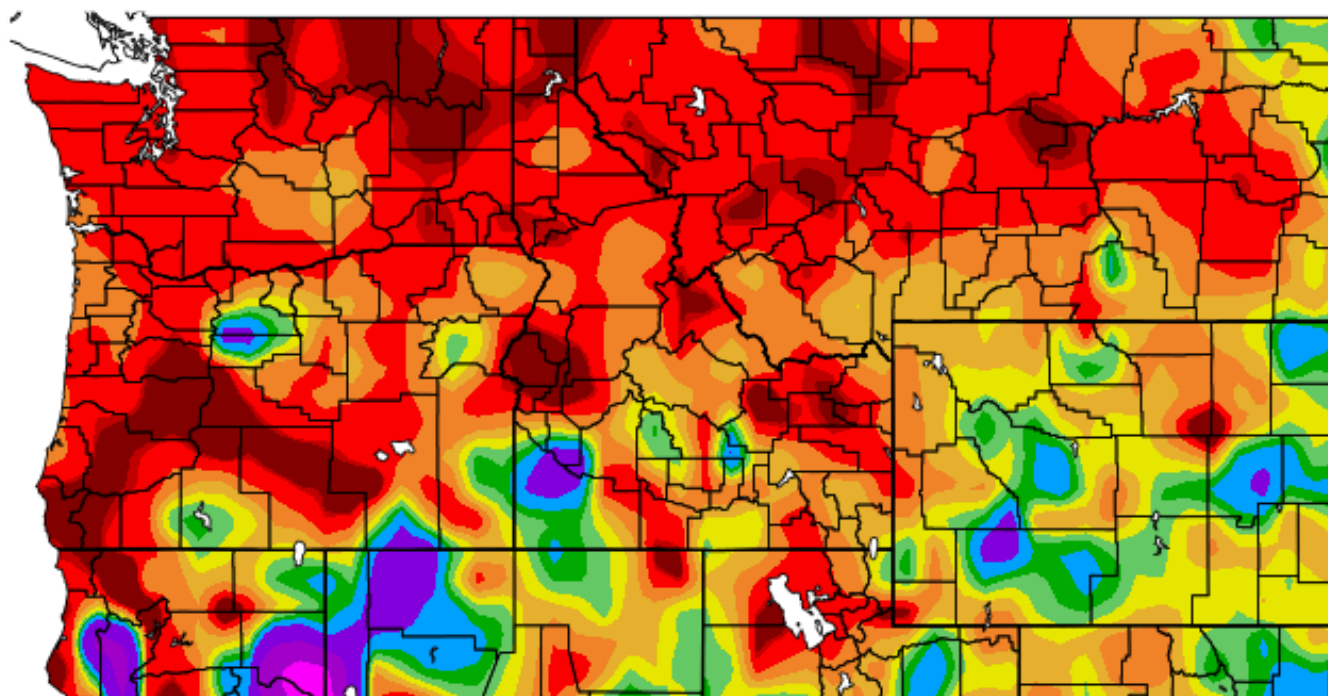
* Data unavailable at time of posting or
unavailable long-term normal.

http://www.wcc.nrcs.usda.gov/ftpref/data/water/wcs/gis/maps/id_mtdprecpcnormal.pdf



**SNOTEL MTD % of Normal
Precipitation for early September 2017**
(image is cropped from above image)

Percent of Normal Precipitation (%) 8/1/2017 – 8/31/2017



Generated 9/5/2017 at HPRCC using provisional data.

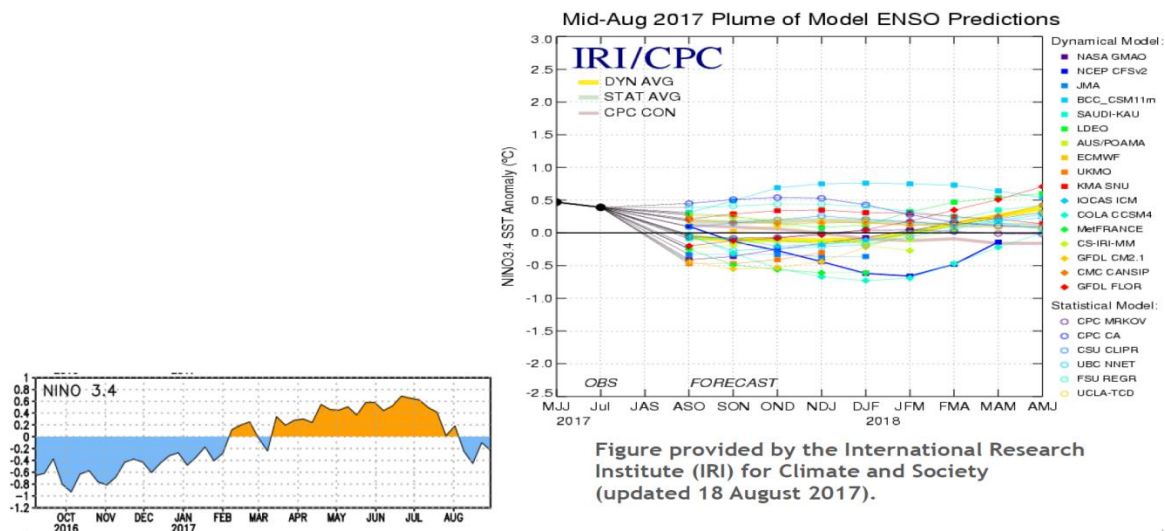
NOAA Regional Climate Centers

<http://www.hprcc.unl.edu/maps.php?map=ACISClimateMaps>

Most of our area received 5 to 75 percent of normal precipitation. Cassia county received 75 to 100 percent of normal precipitation. Eastern Blaine, Northern Minidoka, and Southwest Butte Counties received 150 to 200 percent of normal with a localized, strong thunderstorm.

ENSO Update:

Latest Observed SST Departure: Niño 3.4 ~ -0.2 Deg C



www.cpc.ncep.noaa.gov, iri.columbia.edu/climate/ENSO

CPC Synopsis: As of September 5th, ENSO-neutral conditions are present. ENSO-neutral is favored (~85% chance during Jul-Sep, decreasing to ~55% chance during Dec-Feb) through the Northern Hemisphere winter 2017-2018.

Note: Equatorial sea surface (SSTs) are near-to-below average across the central and eastern Pacific Ocean. The Madden-Julian Oscillation (MJO) showed signs of organization over the past week to ten days, but the overall pattern of tropical variability is mixed, with various modes contributing. Based on upper-level divergence alone, any MJO signal is shifting eastward from the Maritime Continent to the West Pacific. The Pacific Decadal Oscillation (PDO) continues to be slightly negative.

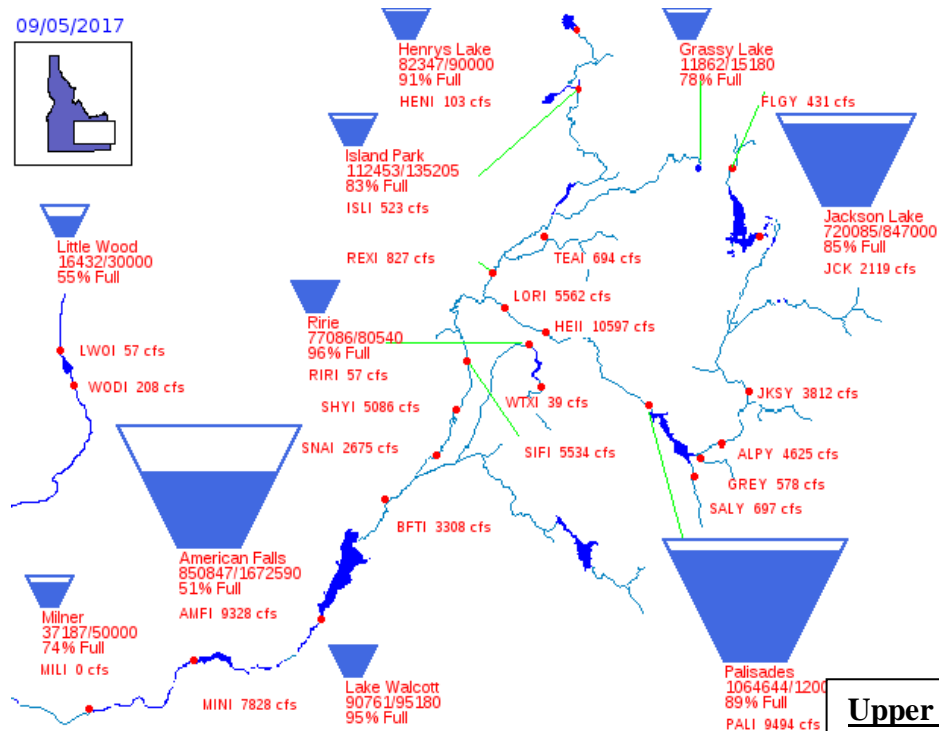
Reservoirs:

Reservoir	% Capacity July 31 ¹	% Capacity August 31 ²	Percent Change	% of Average ²	% of Average Last Year ²
Jackson Lake	97	87	-10	140	102
Palisades	99	93	-6	153	50
Henrys Lake	96	92	-4	108	102
Island Park	91	85	-6	177	35
Grassy Lake	90	78	-12	99	101
Ririe	99	96	-3	132	114
Blackfoot	87	76	-11	153	112
American Falls	79	54	-25	159	41
Mackay	98	91	-7	385	148
Little Wood	95	59	-36	208	116
Magic	92	70	-22	198	109
Oakley	54	42	-12	171	65
Bear Lake	92	88	-1	181	73
Lake Walcott	94 ³	95 ⁴	1	n/a	n/a
Milner	71 ³	74 ⁴	3	n/a	n/a

Source: (1) NRCS July 31, 2017; (2) NRCS August 31, 2017.

(3) US Bureau of Reclamation (BOR) August 12, 2017 (4) BOR Sep 5, 2017

09/05/2017

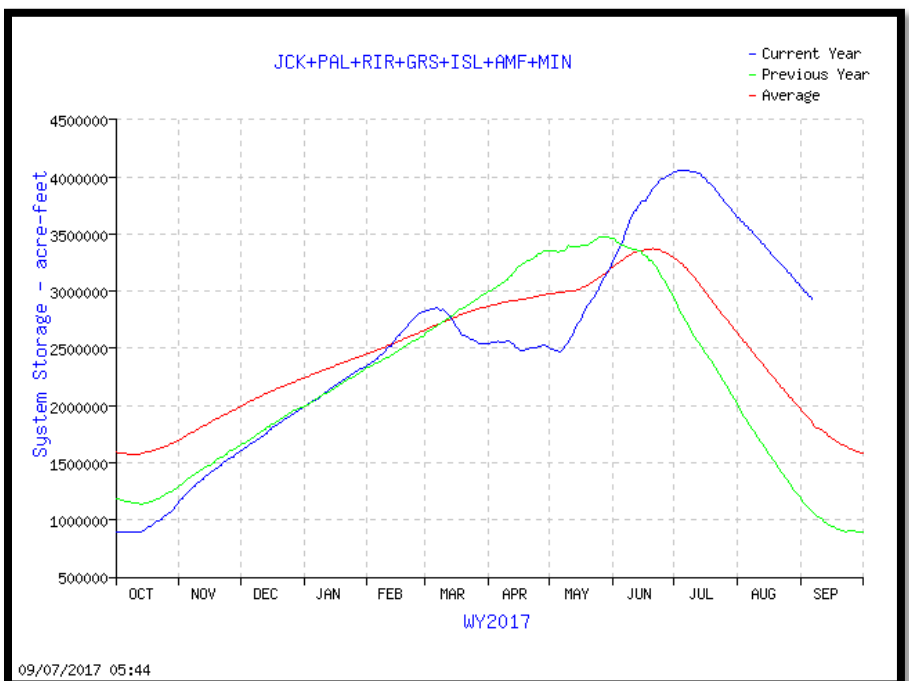


www.usbr.gov/pn/hydromet/burtea.html

**72% of Capacity
in Upper Snake
River System**
(Jackson Lake, Palisades,
Grassy Lake, Island Park,
Ririe, American Falls &
Lake Walcott)

Upper Snake River:
Total Space Available: 1,117,957 AF
Total Storage Capacity: 4,045,695 AF

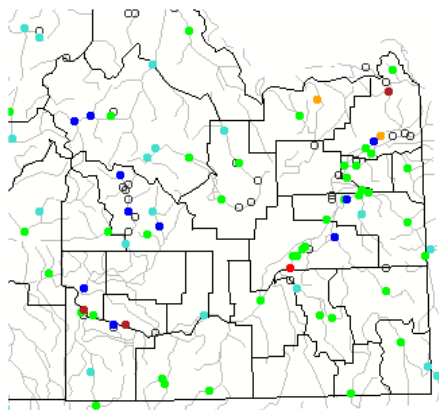
**Graph of Upper Snake River
Current Total System Reservoir
Storage**



09/07/2017 05:44

https://www.usbr.gov/pn-bin/graphwy.pl?snasys_af

Streamflow:



Monthly average streamflow compared to historical average streamflow for August 2017.



<https://waterwatch.usgs.gov/index.php?r=id&id=mv01d>

Explanation - Percentile classes							
Low	<10 Much below normal	10-24 Below normal	25-75 Normal	76-90 Above normal	>90 Much above normal	High	Not-ranked

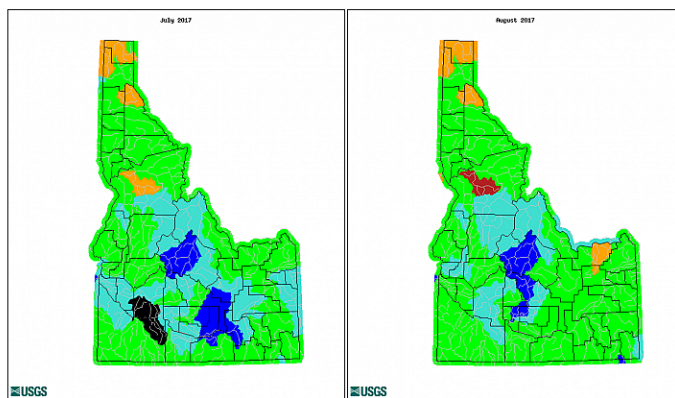
Comparison of Streamflow Maps

Geographic area: Water resource region: GO

Map type: Sub type:

Date (YYYYMM):

Date (YYYYMM):



Explanation - Percentile classes							
Low	<10 Much below normal	10-24 Below normal	25-75 Normal	76-90 Above normal	>90 Much above normal	High	No Data

http://waterwatch.usgs.gov/index.php?id=wwchart_map2

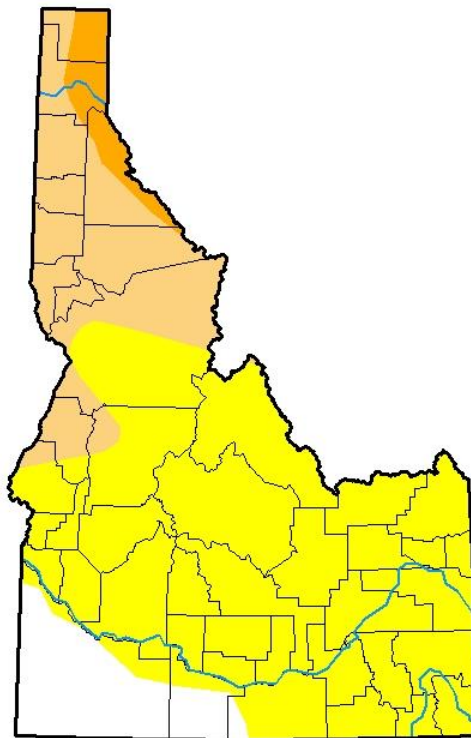
Drought:

U.S. Drought Monitor Idaho

September 12, 2017

(Released Thursday, Sep. 14, 2017)

Valid 8 a.m. EDT



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	9.96	90.04	22.99	3.51	0.00	0.00
Last Week 09-05-2017	9.96	90.04	19.47	2.99	0.00	0.00
3 Months Ago 06-13-2017	100.00	0.00	0.00	0.00	0.00	0.00
Start of Calendar Year 01-03-2017	89.98	10.02	0.04	0.00	0.00	0.00
Start of Water Year 09-27-2016	6.14	93.86	8.89	0.00	0.00	0.00
One Year Ago 09-13-2016	6.14	93.86	15.35	0.02	0.00	0.00

Intensity:

■ D0 Abnormally Dry ■ D3 Extreme Drought
■ D1 Moderate Drought ■ D4 Exceptional Drought
■ D2 Severe Drought

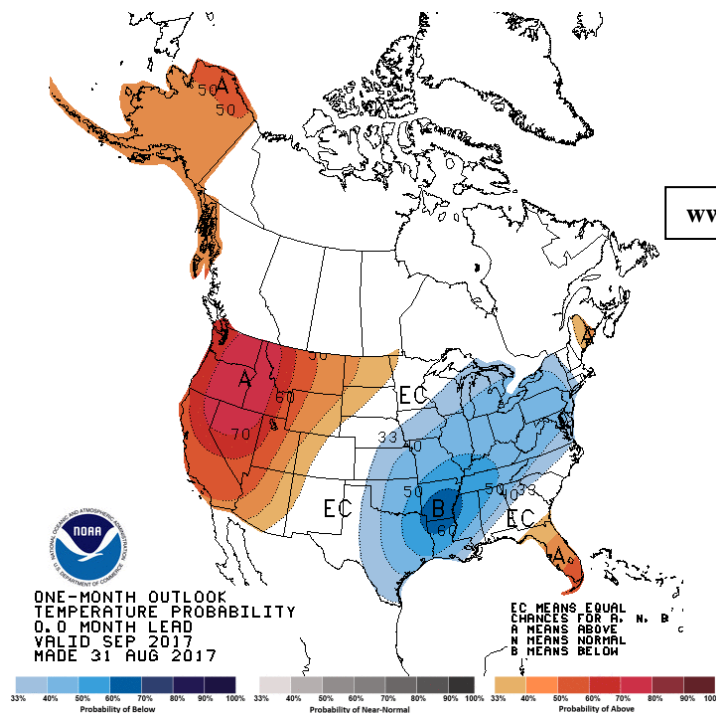
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:

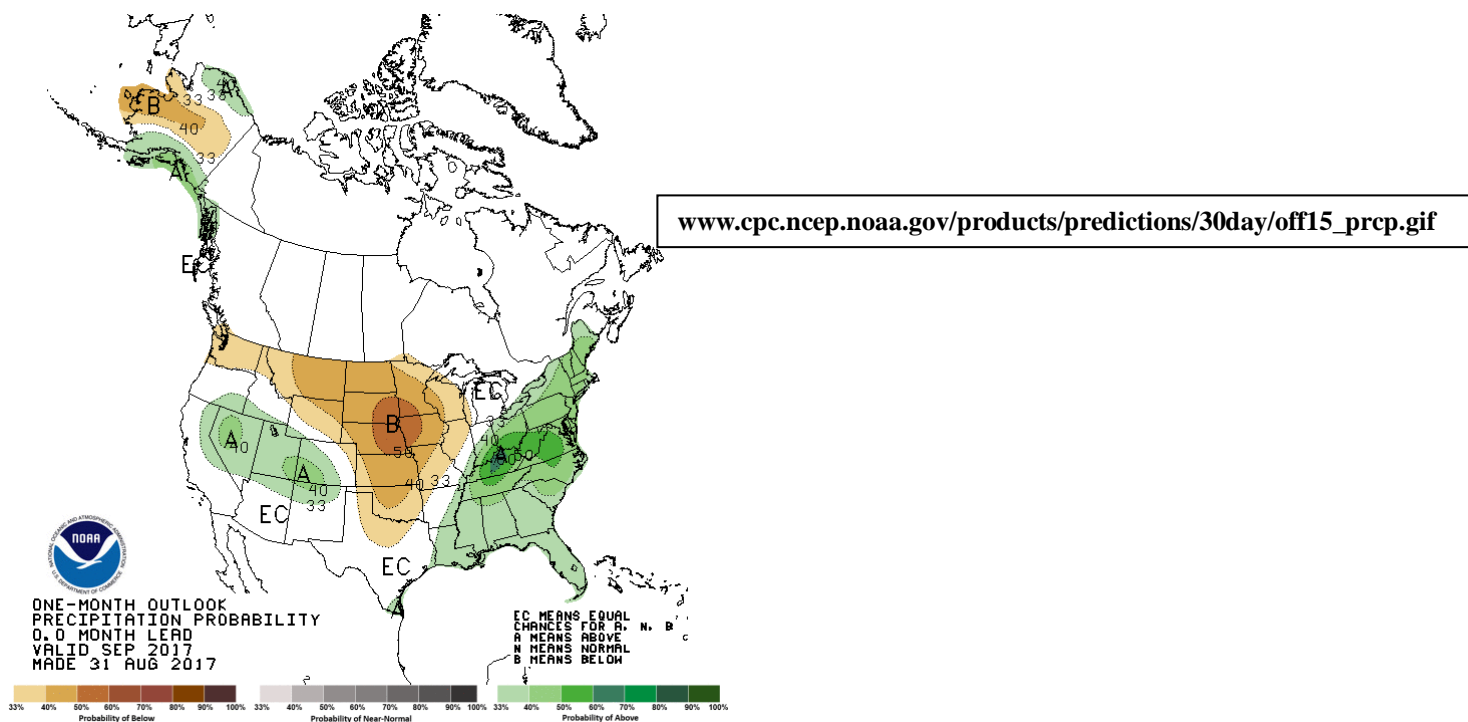
Richard Tinker
CPC/NOAA/NWS/NCEP



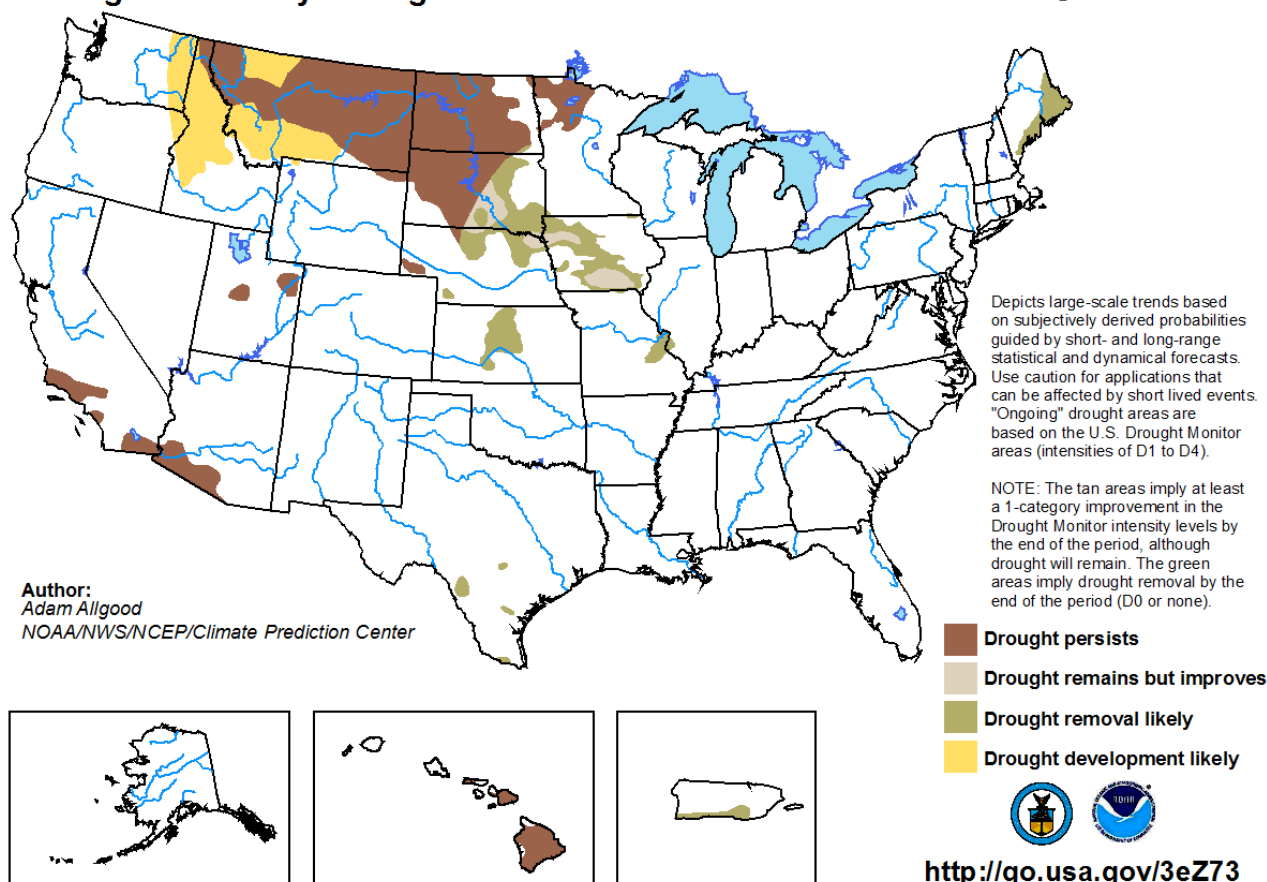
<http://droughtmonitor.unl.edu/>



www.cpc.ncep.noaa.gov/products/predictions/30day/off15_temp.gif



U.S. Seasonal Drought Outlook *Valid for August 17 - November 30, 2017* Drought Tendency During the Valid Period *Released August 17, 2017*



www.cpc.ncep.noaa.gov/products/expert_assessment/season_drought.png

cc:

Jeff Zimmerman, Acting Western Region HCSD
Joe Intermill, Hydrologist-in-Charge, Northwest River Forecast Center
Steve King, Service Coordination Hydrologist /Acting DOH, Northwest River Forecast Center
Michelle Stokes, Hydrologist-in-Charge, Colorado Basin River Forecast Center
Paul Miller, Service Coordination Hydrologist, Colorado Basin River Forecast Center
John Lhotak, Development and Operations Hydrologist, Colorado Basin River Forecast Center
Hydrometeorological Information Center
Dean Hazen, Meteorologist-in-Charge, Pocatello, Idaho
Kurt Buffalo, Science and Operations Officer, Pocatello, Idaho
Vern Preston, Warning Coordination Meteorologist, Pocatello, Idaho
Troy Lindquist, Senior Service Hydrologist, Boise, Idaho
Brian McInerney, Senior Service Hydrologist, Salt Lake City, Utah
Kevin Berghoff, Senior Hydrologist, Northwest River Forecast Center
Taylor Dixon, Development and Operations Hydrologist, Northwest River Forecast Center
Brent Bernard, Hydrologist, Colorado Basin River Forecast Center
PIH Mets/HMT (pih.ops)

End

tw